

Title (en)

GROUND REFERENCE SCHEME FOR A MEMORY CELL

Title (de)

BEZUGSMASSENSCHEMA FÜR EINE SPEICHERZELLE

Title (fr)

SCHÉMA DE RÉFÉRENCE DE MASSE POUR CELLULE DE MÉMOIRE

Publication

EP 3424052 A4 20191106 (EN)

Application

EP 17760740 A 20170301

Priority

- US 201615057914 A 20160301
- US 2017020251 W 20170301

Abstract (en)

[origin: US2017256300A1] Methods, systems, and devices for operating a ferroelectric memory cell or cells are described. A ground reference scheme may be employed in a digit line voltage sensing operation. A positive voltage may be applied to a memory cell; and after a voltage of the digit line of the cell has reached a threshold, a negative voltage may be applied to cause the digit line voltages to center around ground before a read operation. In another example, a first voltage may be applied to a memory cell and then a second voltage that is equal to an inverse of the first voltage may be applied to a reference capacitor that is in electronic communication with a digit line of the memory cell to cause the digit line voltages to center around ground before a read operation.

IPC 8 full level

G11C 11/22 (2006.01)

CPC (source: EP KR US)

G11C 11/221 (2013.01 - EP KR US); **G11C 11/2273** (2013.01 - EP US); **G11C 11/2293** (2013.01 - US); **G11C 11/2297** (2013.01 - KR); **G11C 11/2293** (2013.01 - EP)

Citation (search report)

- [X1] US 2006067101 A1 20060330 - SAKAI NAOFUMI [JP]
- [A] US 2005128784 A1 20050616 - KAWASHIMA SHOICHIRO [JP], et al
- See references of WO 2017151803A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

US 2017256300 A1 20170907; US 9934837 B2 20180403; CN 109074837 A 20181221; CN 109074837 B 20210209; EP 3424052 A1 20190109; EP 3424052 A4 20191106; EP 3424052 B1 20210915; JP 2019513278 A 20190523; JP 7022071 B2 20220217; KR 102248175 B1 20210506; KR 20180110682 A 20181010; SG 11201807493W A 20180927; TW 201735038 A 20171001; TW 201824280 A 20180701; TW I623935 B 20180511; TW I673713 B 20191001; US 10163482 B2 20181225; US 10978126 B2 20210413; US 2018190337 A1 20180705; US 2019130955 A1 20190502; WO 2017151803 A1 20170908

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US 201615057914 A 20160301; CN 201780024670 A 20170301; EP 17760740 A 20170301; JP 2018545414 A 20170301; KR 20187027375 A 20170301; SG 11201807493W A 20170301; TW 106106624 A 20170301; TW 107111426 A 20170301; US 2017020251 W 20170301; US 201715855326 A 20171227; US 201816184480 A 20181108